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# Foreign AGRICULTURE

REVIEW OF FOREIGN FARM POLICY, PRODUCTION, AND TRADE

## IN THIS ISSUE

AGRICULTURE IN CEYLON

THE RURAL COOPERATIVE IN BULGARIA

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## AGRICULTURE IN CEYLON . . . . .

By W. I. Ladejinsky\*

*The temporary loss of the Philippines, French Indochina, Malaya, and the Netherland East Indies has deprived the United Nations of a number of vital agricultural products, chief among them being rubber. The island of Ceylon, pending the liberation of these areas from Japanese control, is the only Asiatic outpost of the British Empire, and of the United Nations as well, that produces considerable quantities of rubber and coconut products, in addition to a large amount of tea.*

*Ceylon's resources are practically all agricultural. As in the case of a number of colonial dependencies, plantation agriculture, as distinguished from native agriculture, is the basis of the island's economy. The former succeeded so well that the export trade of the islands is composed largely of tea and rubber, with relatively small amounts of coconut products (from coconuts grown mostly by natives) and a few other products of minor importance included. At the same time the emphasis upon export crops has led to the neglect of food crops.*

*The question of food self-sufficiency, as against a larger export trade, has received secondary consideration, with the result that Ceylon must import more than two-thirds of its food requirements. This state of affairs, as far as the natives are concerned, has serious drawbacks even in peacetime; in wartime, and especially when the sources of food imports have been cut off, the situation is serious for all concerned.*

### PHYSICAL BACKGROUND

#### Geographic Position

The island of Ceylon lies in the Indian Ocean off the southeast tip of India, the nearest point being only 22 miles from the mainland. It is also situated approximately halfway between Arabia and China and is on the direct line from Europe to the Far East. At present, Ceylon stands guard over the one remaining sea route by which supplies from the United States and Britain reach the eastern coast of India and, indirectly, China. The greatest length of the island from north to south is 270 miles, and its greatest width from east to west is 140 miles. It has a total area of 25,000 square miles, or is about the same size as West Virginia.

#### Topography and Climate

The topographical features of Ceylon are clearly marked. With the exception of the center of the southern half of the island, it is a great plain from sea to sea. The plain is narrow along the southern margin of the island but is much wider on the western and eastern sides and especially in the north. From the coast the land rises to form a mountainous region of some 4,000 square miles. The rugged highlands

\* Office of Foreign Agricultural Relations.



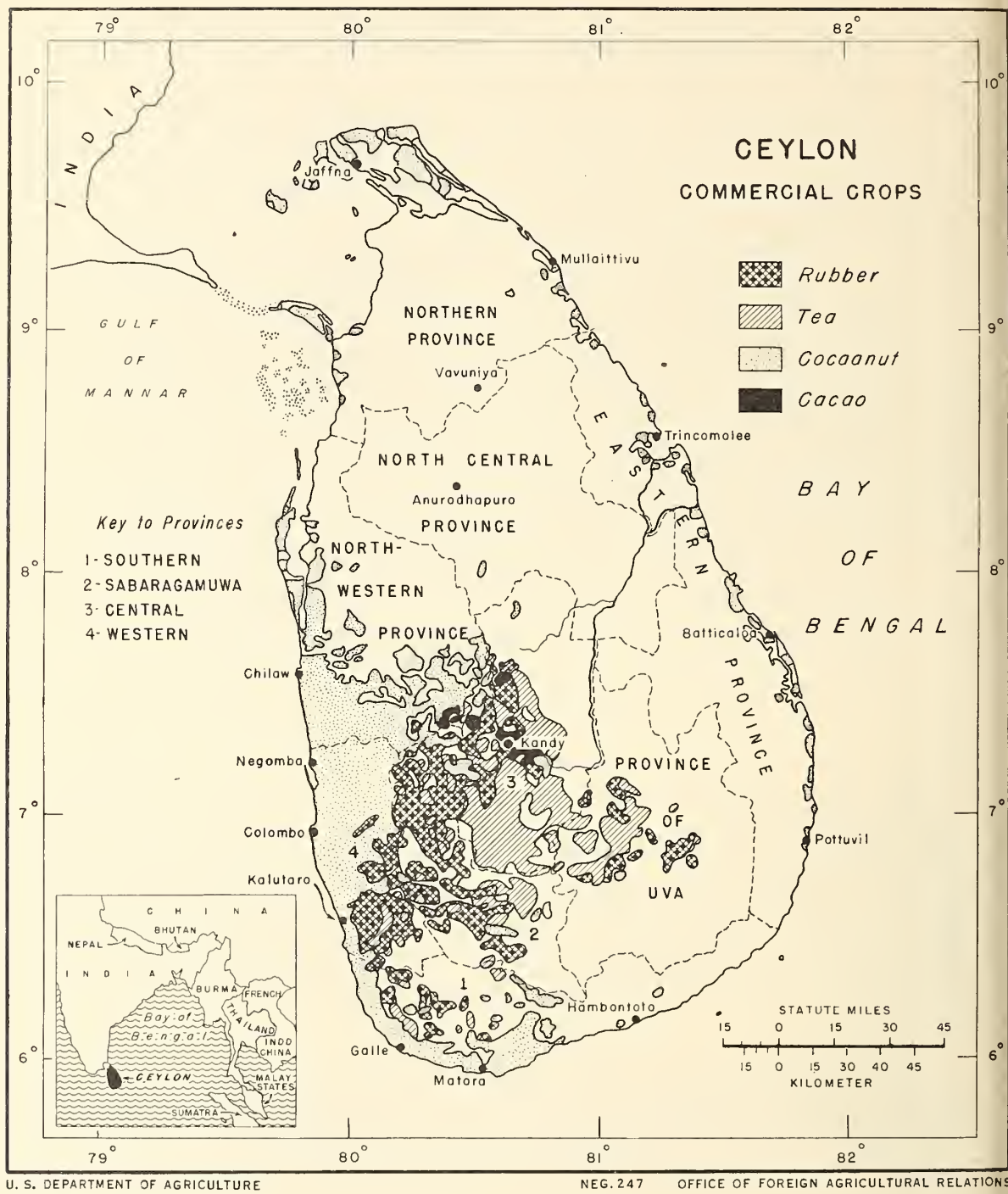


FIGURE 1.-Map of Ceylon.

culminate in a peak 8,290 feet above the sea level. Ceylon has a number of rivers, most of which have their source in the hill country. Of those, the Mahaweli Ganga, 206 miles in length, is the largest. The land bordering the rivers is quite fertile with the accumulation of alluvial silt and clay brought down from the hills.

The northwestern coast and, to a lesser extent, the eastern coast have relatively little vegetation. The western coast southward and all the southern coast are fringed by coconut palms, which grow almost to the water's edge. Practically all the western slopes of the mountains up to 6,000 or more feet are under tea, and much of the area between the tea and coconut regions is devoted to rubber.

The climate of Ceylon, for the major part, is tropical. In the low country the average temperature is almost 80° F., with a variation of not more than 1° to 2° F. over the entire year. At Nuwara Eliya, which has an elevation of 6,000 feet, the temperature is usually around 59° F. The hottest months on the west coast are March to May and on the east coast May to July.

Since variations of temperature in the plain are slight, seasons are distinguished by differences in rainfall. In this respect the southwestern and northeastern monsoons are distinctive features. In the northern half of Ceylon is a dry zone, which has only the light rains of the northeastern monsoon. On the other hand, in the highlands and the low country to the west and southwest of them, where both monsoons are intercepted, the precipitation in certain sections may be as high as 200 inches per year. Generally, the southwestern part of the island has an annual rainfall of from 80 to 200 inches, whereas the dry areas of the north, northwest, and southeast have an annual precipitation of less than 40 inches. Furthermore, most of the rainfall in the dry zones is unevenly distributed. Because of the sharp variations in rainfall, the western and southern districts are far more productive than those in the north and east.

### Soils

The soils of Ceylon are not so fertile as those of volcanic origin found in Java and in parts of Sumatra, but some of them are adapted to the cultivation of rubber, tea, coconuts, rice, and other food crops. The soils of the island fall into a number of groups: (1) Lateritic gravelly loams, (2) lateritic brown loams, (3) cinnamon soils, (4) red sandy soils, and (5) paddy soils.

With regard to the first group, soil scientists of Ceylon have pointed out (10, pp. 12, 15, 17, 20)<sup>1</sup> that they are "distinctly poor agriculturally, but show response to cultivation and manuring." Rubber is the principal crop they carry, followed by tea. In general, they are not suited for annual crops. The brown loams of the second group "are fairly rich soils, and are suited for cultivation of either annual or perennial crops." The so-called cinnamon soils "are deep, almost white sands, poor in all plant fertilising constituents . . . these soils can only produce good crops both of annuals like vegetables and of perennials like coconuts, if liberally manured with bulky organics and artificial fertilisers." The red sandy soils are characteristic of the coastal plains. Although poor in fertilizing constituents, they are "physically ideal coconut soils, being often of great depth, well-drained and easily cultivated." The paddy soils (irrigated rice lands) occur in the greater part of Ceylon.

<sup>1</sup> Italic numbers in parentheses refer to Literature Cited, p. 20.

### POPULATION AND SOCIAL CONDITIONS

Ceylon had an estimated population of 5,864,000 in 1938, or an average of 231 persons per square mile. It is therefore fairly thickly populated, ranking above British Malaya and Thailand, but is considerably less populated than Java and Japan and practically on the same level with India. As is the case with any of the above-mentioned countries, the population is unevenly distributed. According to the 1931 census, the density of population ranged from a low of 24 in the North Central Province to over 1,000 per square mile in the Western Province, which, agriculturally, is one of the best developed.

The population of Ceylon is mixed. Two-thirds comprise what are perhaps the original inhabitants of the island, the Sinhalese. The Ceylon Tamils and the Indian Tamils (recent arrivals) account for one-fourth of the population. Moors (326,000), Burghers<sup>2</sup> and Eurasians<sup>3</sup> (32,000), Malays (16,000), Europeans (9,000), and others (33,000) constitute the remainder. Data on occupational distribution of these groups in recent years are not available; the latest published refer to 1921. Clearly, though, the occupational pattern, or the economic conditions under which the various groups live, has not changed in the past two decades.

As in the past, the vast majority of the Sinhalese are rice cultivators or independent coconut growers who operate, more often than not, on rented land. A few are owners, managers, or supervisors of small rubber holdings or large coconut plantations, and a small number are agricultural laborers. The relationship of the Sinhalese to the land they cultivate helps to explain their low economic status. From 70 to 90 percent of the rice fields are not cultivated by those who own the land but by tenants. The latter work the land on what is known as the Ande system of tenure, a system that calls for a 50-50 division of the crop. To this one must add the fact that, while the average Ceylonese peasant has always been more or less in debt, the depression of the 1930's caused the transfer of about 50 percent of the coconut lands to the hands of the Indian money lenders.

The Ceylon Tamils are landowners, cultivators, fishermen, and money lenders, whereas the Indian Tamils provide the bulk of laborers for the tea and rubber plantations. The Moors furnish a good share of the shopkeepers. The clerks in business establishments and government offices and skilled workers, such as tailors, milliners, and dressmakers, are recruited among the Burghers and Eurasians. The Europeans, over 90 percent of whom are English, occupy all the commanding positions in Ceylon's economy and administration.

### AGRICULTURAL CHARACTER OF CEYLON

Ceylon, perhaps more than any other country in the Far East and southeastern Asia, is an agricultural country. The industrial development of Japan, the mineral resources of nearby India, the tin of Malaya, and the oil of the Netherland East Indies, all factors that temper the agricultural edge of those countries, are absent in Ceylon. The island's output of graphite, the only mineral of economic significance, is too small to affect in any way the agricultural character of the island. The introduction of tea and rubber only added, among other things, a large-scale agricultural economy to the long-existing, small-scale farming enterprises.

<sup>2</sup> Descendants of the Portuguese and Dutch who have intermarried with natives.

<sup>3</sup> Mostly of mixed British and native descent.



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TABLE 1.-Exports of tea from Ceylon, volume and value, total value of all exports, and value of tea exports as percentages of total exports, 1919-41

| PERIOD    | TEA EXPORTS  |                 | VALUE OF TOTAL EXPORT TRADE | VALUE OF TEA EXPORTS AS PERCENTAGES OF TOTAL EXPORTS |
|-----------|--------------|-----------------|-----------------------------|------------------------------------------------------|
|           | VOLUME       | VALUE           |                             |                                                      |
|           | 1,000 pounds | Million dollars | Million dollars             | Percent                                              |
| Average:  |              |                 |                             |                                                      |
| 1919-1923 | 181,731      | 41.5            | 103.5                       | 41.4                                                 |
| 1924-1928 | 219,045      | 73.8            | 158.1                       | 46.9                                                 |
| 1929-1933 | 241,436      | 50.5            | 87.8                        | 57.9                                                 |
| 1934-1938 | 219,616      | 58.6            | 98.2                        | 59.7                                                 |
| Annual:   |              |                 |                             |                                                      |
| 1929      | 251,489      | 74.2            | 147.5                       | 50.4                                                 |
| 1930      | 243,021      | 65.6            | 111.9                       | 58.7                                                 |
| 1931      | 243,899      | 46.7            | 76.4                        | 61.2                                                 |
| 1932      | 252,757      | 28.4            | 44.9                        | 63.2                                                 |
| 1933      | 216,016      | 37.5            | 58.3                        | 64.3                                                 |
| 1934      | 218,641      | 54.9            | 92.9                        | 59.1                                                 |
| 1935      | 212,084      | 53.9            | 87.1                        | 61.8                                                 |
| 1936      | 218,068      | 57.5            | 94.6                        | 60.8                                                 |
| 1937      | 213,642      | 63.6            | 118.1                       | 53.9                                                 |
| 1938      | 235,647      | 63.1            | 98.1                        | 64.3                                                 |
| 1939      | 228,063      | 62.6            | 101.2                       | 61.8                                                 |
| 1940      | 246,800      | 62.8            | 108.3                       | 60.0                                                 |
| 1941      | 238,554      | 70.0            | 117.6                       | 59.5                                                 |

<sup>1</sup> Excludes \$2,075,000 due to adjustment of the value of tea and beginning June excludes certain exports not being reported during the war.

Compiled from official sources.

The importance of the agriculture of the island is illustrated by the fact that agricultural products account for almost the total value of Ceylon's exports. Food-stuffs accounted for over a third of the total imports in 1938. This is in part the result of an agricultural policy that encouraged the production of export crops in preference to food crops.

#### LAND UTILIZATION

In this respect the land utilization of Ceylon, the total crop acreage, and its distribution are instructive.<sup>4</sup> If the data are reasonably correct, the total area under crops in 1938 amounted to 3,483,000 acres, or 22 percent of the total area of Ceylon. This compares well with other countries, but, as will be indicated elsewhere, the proportion of the crop acreage devoted to rice falls far short of the country's needs. This is not because of exhaustion of land reserves. In 1915 the official yearbook of Ceylon recorded 2,901,000 acres under cultivation and 3,558,000 acres suitable, or capable of being rendered suitable, for cultivation. If the 1938 data on crop acreage are valid, the net increase of land in crops between 1915 and 1938 amounted to only 587,000 acres.

This in itself would not be disadvantageous to the welfare of the island if the natives, instead of cultivating rice fields, engaged in the growing of more profitable crops. Such is the case, however, to a small extent only. Unlike the natives of the Netherlands East Indies, who control about 50 percent of all the export crops, the Ceylonese do not enjoy a favorable position. They have only a 10- to 15-percent share in the island's premier agricultural industry, the tea industry. Their share in the

<sup>4</sup> Ceylon's agricultural statistics, particularly those relating to native crops are faulty, as shown by the footnotes attached to table 2.

TABLE 2.-Acreage of specified crops in Ceylon

| CROPS                    | ACREAGE             | CROPS              | ACREAGE                | CROPS                | ACREAGE              |
|--------------------------|---------------------|--------------------|------------------------|----------------------|----------------------|
|                          | <i>Acres</i>        |                    | <i>Acres</i>           |                      | <i>Acres</i>         |
| Arecanuts . . . . .      | <sup>1</sup> 69,000 | Coconuts . . . . . | <sup>2</sup> 1,100,000 | Palmyra . . . . .    | <sup>1</sup> 50,000  |
| Cacao . . . . .          | <sup>1</sup> 34,000 | Cotton . . . . .   | <sup>1</sup> 2,000     | Rubber . . . . .     | <sup>4</sup> 604,111 |
| Cardamoms . . . . .      | <sup>1</sup> 6,000  | Grains other than  |                        | Sugarcane . . . . .  | <sup>1</sup> 1,000   |
| Chena products . . . . . | <sup>1</sup> 77,000 | paddy and chena    |                        | Tea . . . . .        | <sup>5</sup> 556,650 |
| Cinnamon . . . . .       | <sup>1</sup> 26,000 | products . . . . . | <sup>1</sup> 28,000    | Tobacco . . . . .    | <sup>1</sup> 14,000  |
| Citronella . . . . .     | <sup>1</sup> 33,000 | Paddy . . . . .    | <sup>3</sup> 850,000   | Vegetables . . . . . | <sup>1</sup> 32,000  |

<sup>1</sup> Based on results of the Census of Production, 1921 and 1924.

<sup>2</sup> Based on results of the partial Census of Production, 1929.

<sup>3</sup> Based on statistics collected for 1937-38.

<sup>4</sup> Based on Rubber Controller's Survey for 1938.

<sup>5</sup> Based on Tea Export Controller's Report for 1937-38.

Approximations for various zones; the figures for the provinces and districts were omitted, since they are not considered sufficiently accurate for publication. The totals shown are in several cases of doubtful accuracy.

rubber industry is larger, but in comparison with tea this is as a whole of secondary importance. The factors that could compensate for the dependence of the people of Ceylon upon imported foodstuffs are therefore limited.

The utilization of land in Ceylon would not be so one-sided, and the agricultural economy of the island would be more nearly balanced but for the tardy distribution of the reserve (Crown) land among the peasants. This situation may be improved as a result of the enactment in 1935 of the Land Development Ordinance.

Any land that the natives may get, however, will be largely in the dry zone, which includes the Northern and North Central Provinces, part of the Northwestern and Southern Provinces, the low country of Uva, and the whole of the Eastern Province. The characteristic features of this zone are large areas of primary and secondary jungle and wastelands, a sparse population, and scattered cultivation. Except under irrigation, returns from the land are low, but the utilization of so large an area is of primary significance. If successfully developed, it would mean a larger supply of foodstuffs to render Ceylon more independent, land for the growing peasant population, and, furthermore, an improvement in its economic status.

In any attempt to utilize this large area more economically, the all-important question of irrigation comes to the fore. In Ceylon, as in most other tropical regions where rice is grown, land utilization is bound up with irrigation. This often holds true in regions of sufficient rainfall and to a much greater degree in the dry regions. The rainfall for the entire island averages about 80 inches a year, but its seasonal incidence is uncertain. Rice cultivation cannot be carried on if it is dependent solely on the vagaries of such rainfall, and, with few exceptions, the productivity of the land is limited to only one crop a year. Two-thirds of Ceylon's rice acreage depends upon artificial irrigation. This is indicated by the data showing the four main categories into which Ceylon's rice area is divided (see table 3).

The characteristic feature of Ceylon's irrigation works is that practically all irrigation projects now in operation, or those that have been put into operation within recent years, are not new projects, but renovations of ancient irrigation works. These go back to the times when Ceylon supported a population considerably larger than the present one, and when the acreage under rice was from two to three times larger than that of the present.

TABLE 3.-Irrigated and unirrigated rice acreage in Ceylon, 1938

| CATEGORY                      | APPROXIMATE AREA | CATEGORY                  | APPROXIMATE AREA |
|-------------------------------|------------------|---------------------------|------------------|
|                               | <i>Acres</i>     |                           | <i>Acres</i>     |
| Major works . . . . .         | 170,426          |                           |                  |
| Minor works: village tanks. . | 200,000          | Direct rainfall . . . . . | 270,000          |
| Minor works: village channels | 170,000          |                           |                  |
| Total irrigated . . . . .     | 540,426          | Grand total . . . . .     | 810,426          |

Compiled from official sources.

## TYPES OF FARMING

The agricultural economy of Ceylon falls into two main types: (1) Small-scale, native farming and (2) large-scale, primarily European, plantation farming. Practically the entire output of the plantations is intended for export; that of the native farms is for both domestic consumption and export. Tea and rubber are Ceylon's two outstanding plantation crops. Some of the coconut acreage and that of other minor crops is cultivated on a plantation basis, but, in view of the predominance of small holdings, all such crops may rightly fall in the category of native farming.

## Plantation Crops

## Tea

What rubber is, or was, to British Malaya, tea is to Ceylon. It is the island's premier commercial crop, the basis of the plantation industry, of Ceylon's commerce, and particularly of its foreign trade. Of Ceylon's export trade, which averaged \$98,300,000 (264 million rupees) annually during 1934-38, tea exports accounted for 60 percent of the total value.

As in the case of rubber in southeastern Asia, tea is not indigenous to Ceylon. It was introduced into the island in the middle of the last century from India and took root in the 1870's after the once successful coffee industry, with an output of over 100 million pounds, was completely destroyed by a leaf disease. The first 1,000 acres were planted in 1875. The subsequent "rush into tea" became so great that between 1880 and 1900 the area under tea increased from 9,000 to 384,000 acres. A steady increase has been shown since then (see table 4), except during the first decade of the present century.

Practically the entire tea acreage is in the center of the hill country. The principal tea districts are located in the mountainous Central Province at elevations up to 7,000 feet, most of which are above 3,000, with the best quality at elevations of over 4,000 feet. There are some extensive districts, however, where tea is grown at altitudes below 1,500 feet.

TABLE 4.-Tea acreage in Ceylon, specified years

| YEAR       | ACREAGE      | YEAR       | ACREAGE      | YEAR       | ACREAGE      | YEAR       | ACREAGE      |
|------------|--------------|------------|--------------|------------|--------------|------------|--------------|
|            | <i>Acres</i> |            | <i>Acres</i> |            | <i>Acres</i> |            | <i>Acres</i> |
| 1875 . . . | 1,080        | 1890 . . . | 220,000      | 1910 . . . | 385,775      | 1930 . . . | 478,000      |
| 1880 . . . | 9,274        | 1900 . . . | 384,000      | 1920 . . . | 404,500      | 1938 . . . | 559,137      |

Compiled from official sources.



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Tea thrives under the most diverse conditions of soil, but it does best on a medium or light loam. In Ceylon cleared land that has been heavily forested is the best that can be had for tea plantations. Little remains of this type of land, and *patanas* (grassy downs) and *Chenas*, or burnt-over land, are used when no other land is obtainable. In general the tea soils of Ceylon do not compare well with those of South India, Java, and Sumatra, as reflected, to some extent, in a smaller yield per acre and in the necessity of applying fertilizer at an early stage in the development of the tea plantations.

The moist tropical climate of Ceylon is favorable to tea growing. In districts of high altitude and high-quality tea, rainfall amounts to 90 inches, and in the lowland region, where poor tea is grown, the annual average amounts to about 150 inches. Although rainfall varies greatly, in every place where tea is grown in Ceylon - be it high- or poor-quality tea - it is reasonably well distributed, and abundant water is available.

Ceylon tea comes from the seed generally called Assam, which originated in India. A tea bush grown from seed takes about 5 years to bear. The life of a bush is long; there are bushes in Ceylon that have borne for 50 years. The number of bushes per acre averages between 3,000 and 4,000. Since the yield of the tea plant is greatly improved by fertilization and many bushes have been under cultivation for decades, the planters resort to natural or artificial fertilizers in order to maintain productivity.

Tea growing in Ceylon is essentially a plantation industry. There are some 2,362 plantations, with an area of 487,000 acres, or 87 percent of the total tea acreage. The average per estate is only 206 acres, but the tendency has been to form groups of estates, which function as units, each with one director and a factory. The area of such a group, however, seldom exceeds 2,500 acres. About 70,000 acres or 13 percent of the total tea acreage is in the hands of natives, the small landholders. An investigation (8, p. 88) carried on in 1932 revealed that there were 2,983 holdings of 1 acre or less; 3,181 between 1 and 5 acres; 628 between 5 and 10 acres; and 313 of over 10 but less than 20 acres in extent.

The difference in size presupposes a qualitative difference in the cultivation of the holding. As in the case of plantation versus native rubber throughout southeastern Asia, plantation tea growing is based upon wide scientific information. Much of the latter is furnished by the Tea Research Institute of Ceylon. The small holder, however, is in no position (mainly for economic reasons) to adopt all the best methods practiced on the large estates. In consequence the bushes are smaller, or of poorer quality, the soil is deteriorating, and the yield per acre is considerably below that of the plantations.

Tea requires much attention in cultivating; pruning and plucking must be done frequently and by hand, and in the factories much manual work is carried on. The plantations require, therefore, large numbers of workers. One should note in this connection that most of the laborers employed on the tea and rubber plantations are not native. They are Tamils, imported from southern India. Since the coconut plantations employ only a few Indians, the assumption is that 680,000 workers engaged in 1938 by the plantations were employed on tea and rubber plantations (4, p. 54). According to one estimate, 84,000 natives were employed on such plantations in 1937 (13, p. 148).

The question of native versus Indian labor has been a source of political agitation and recrimination due to the refusal on the part of the European plantations to



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employ native labor. The charge is not denied; the preference for Indian labor is explained on the ground that native farmers cannot maintain the discipline required to promote the efficiency of a large labor force. Whatever the justice of this statement, the employment of natives would probably result in larger labor costs than the employment of Indians, whom economic conditions compel to migrate to Ceylon in search of a living.

The immigration of Indian labor into Ceylon is controlled by the Government of Ceylon, and none save *bona fide* workers whose services are requisitioned are allowed to enter the island. There is a special Department of Indian Immigrant Labor, whose function is to look after the interests of the Indian laborers who agree to work on plantations under the terms and conditions laid down by the Emigration Act in 1922 of the Indian Government.

The Tamil labor force consists of *Kanganies* or native foremen, sub-*Kanganies*, and the coolie field and factory hands of both sexes and of various ages, including children over 10 years old. The working day for field coolies is fixed at 9 hours. Overtime is paid at a rate of one and one-eighth of the legal minimum daily wage. The following pre-war figures show the wages paid to immigrant laborers:<sup>5</sup>

|             | Men         | Women       | Children    |
|-------------|-------------|-------------|-------------|
|             | U. S. cents | U. S. cents | U. S. cents |
| Upcountry   | 19          | 15          | 11          |
| Midcountry  | 16          | 13          | 9           |
| Low country | 15          | 13          | 9           |

In addition to wages, workers receive one-eighth of a bushel of rice per month, free housing, and some form of medical service.

On the whole, wages and other conditions under which the Tamils work the tea gardens leave much to be desired, but the planters maintain that Ceylon must compete with other eastern productive areas where labor costs are presumably even smaller than in Ceylon. The labor problem of the island, therefore, appears to be inextricably bound up with that of other Asiatic countries where competing commercial crops are produced.

The average yield on Ceylon plantations is usually between 400 and 600 pounds per acre, although on some a yield of 700 to 900 pounds is not unusual. On one of the plantations at a high elevation the following yields were reported (17, p. 431):

|                          |            |
|--------------------------|------------|
| First year after pruning | 500 pounds |
| Second " " "             | 900 "      |
| Third " " "              | 950 "      |
| Fourth " " "             | 850 "      |

Accurate estimates of yields on small holdings are difficult to make. The figures given are rough approximations. In the opinion of one investigator (8, p. 93), the yield on a good, small holding is well below 400 pounds and that "by comparison with adjacent estates . . . the yields of small-holdings could be raised by suitable cultivation to at least 2 or 3 times their present amount."

<sup>5</sup> These rates have been in force from November 16, 1934 (4, p. 55).

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Tea exports from Ceylon are almost equivalent to production, since domestic consumption is estimated at from 5 to 12 million pounds (9), or 2 to 5 percent of exports plus consumption. In the period 1935-38 Ceylon's exports accounted for 25 percent of the total world tea exports. (For the volume, value, and the share of tea in Ceylon's total trade, see table 1.) Throughout earlier years exports showed a steady rise and reached a peak of 253 million pounds in 1932; they declined in subsequent years, but this was due to a restrictive scheme<sup>6</sup> that fixed Ceylon's exportable quota at 220 million pounds. When in 1938 the tea-restriction scheme was extended for another 5 years, Ceylon's export quota was raised to 233 million pounds.

Tea prices have fluctuated considerably since the late 1920's. The average price per pound in Ceylon markets stood at 31 cents, United States currency, in 1928 but fell to half that figure in 1932. Since that time, however, under the International Tea Agreement, prices have advanced without interruption. The average during 1939 was 25 cents. Although tea prices suffered somewhat from the depression of the 1930's, they held up much more firmly than did those of most of Ceylon's other important exports, especially rubber. The demand for tea, stimulated by the war, resulted in further increases, and a high of 34 cents was reached during January-September 1942. This was accompanied by a rise in cost of production, but this did not impair the industry's prosperity.

A characteristic feature of the Ceylon tea-export trade is that about 90 percent finds an outlet in Empire markets. Great Britain alone accounts for 70 percent of the exports, and most of the remainder is distributed among Australia, New Zealand, and British South Africa. The United States and Canada take about 5 percent each. This concentration of exports in countries with a low elasticity of demand for tea has always favored the development of Ceylon's tea industry.

On the whole, tea in Ceylon may be called a typical plantation industry. The latter was defined (11, p. 280) as one that involves "the establishment of large areas under one main crop, and the application of labour and capital to it in such a way that production is rendered most profitable over the whole economic life of the crop." If that definition is correct, then the British, who are responsible for its establishment and development, have succeeded eminently in their purpose. To estimate the amount of the profit derived by the British from the tea industry is difficult, but indirect evidence indicates that it is considerable. Tea, unlike rubber, has enjoyed a United Kingdom and Empire market. Tea prices, though reduced in the thirties, remained fairly steady when compared to the sharp fluctuations of rubber prices. All concerned with the industry have benefited to a larger or smaller degree, depending upon the economic stake held by individuals or groups connected with it.

### *Rubber*

After tea, rubber is Ceylon's most important export crop. In the years of high rubber prices, such as 1925 and 1926, the product came fairly close to equaling the share of tea in Ceylon's export trade. Normally, however, rubber lags far behind tea; in the 5 years before the outbreak of the war (1934-38) the annual value of tea exports was three times that of rubber.

Since Japan's occupation of the principal rubber-producing areas of southeastern Asia, Ceylon rubber has assumed a relation out of proportion with its output, both past and present. A few figures, relating to any pre-war year, reveal the present

<sup>6</sup> For a detailed account of the scheme, see (1).

role of Ceylon as a rubber producer. Shipments of crude rubber from all producing countries in 1939 amounted to 1,124,500 short tons. Of this total, the countries occupied by Japan supplied 1,008,500 short tons, or 90 percent of the total. More than half (68,000) of the remaining 116,500 tons was provided by Ceylon; Africa and Latin America supplied 46,000 tons, including Mexican guayule. Ceylon's rubber supplies, when measured against those lost to Japan, are small. At this writing, however, the rubber output of Ceylon amounts to about 146,000 tons and is the only remaining source open to the United Nations in southeastern Asia.

The history of the rubber industry in Ceylon is not unlike the history of the principal rubber-producing countries of southeastern Asia. The importation of seedlings grown from seed of the Brazilian *Hevea* yielded rich returns in Ceylon, as elsewhere, although the industry has never attained the important position held by the rubber industry in the Netherland East Indies or British Malaya. During the early stages interest in rubber growing in Ceylon was not very pronounced, due to the assured success of tea as contrasted with the doubtful prospects of rubber. With the increased demand, however, the limited supply and high prices provided a great impetus for the young plantation industry of Ceylon. Along with other rubber producers Ceylon rubber planters reaped large profits in the days of high rubber prices, suffered considerable losses in the days of very low prices in the early 1930's, but, more recently, have achieved recovery under the international rubber-restriction schemes.

The area under rubber in Ceylon was estimated at 604,000 acres in 1938. There has been a considerable increase since then, the 1940 area being placed by one source at 639,000 acres (15, p. 74). This represents 7.4 percent of the world acreage under rubber. After Malaya, with 40.3 percent, and the Netherland East Indies, with 37.2 percent of the total rubber area, Ceylon had the third largest rubber acreage. In pre-Pearl Harbor days it was a poor third, but at present it is the only single large pre-war acreage in the hands of the United Nations.

The rubber acreage is found at elevations well below 2,000 feet; it requires a well-distributed rainfall of not less than 80 inches. Most of the acreage is in the Province of Sabaragamuwa and in portions of the Western, Central, and Southern Provinces.

Rubber growing is carried on in Ceylon on large (100 acres and over), medium (10 to 100 acres), and small holdings (less than 10 acres). More than half (57 percent) of the entire acreage is on large plantations, and the medium and small holdings share the remainder of the acreage equally. The large-scale rubber plantations are owned and managed by Europeans, with the natives controlling the small holdings. If the natives' holdings were confined to the latter category only, their share in the total amount of land under rubber would be 21 percent. Actually, the share of the natives is estimated at 40 percent of the acreage as against 60 percent in the hands of Europeans. The assumption is, therefore, that, although many native holdings are very small, others are considerably larger than 10 acres.

The manner of growing rubber, whether on the large or small holdings, differs little from that of Netherland Indies or British Malaya. The yield per acre varies considerably with the soil, age of the trees, rainfall, and the planting and treatment of the trees; in Ceylon the range is from 150 to 700 pounds per acre, 400 to 500 pounds per acre being considered a good yield for an estate in full bearing. The International Rubber Restriction Committee estimated the average yield per acre in Ceylon at 390 pounds as against 430 pounds in Netherland Indies and Malaya and 570 pounds in French Indochina. The higher yields in the more easterly areas were due to the extensive planting of high-yielding budded trees.



Consumption of crude rubber in Ceylon is negligible; for this reason shipments of rubber may be considered equivalent to production. In the 5 years 1935-39, shipments averaged about 64,000 short tons per year. With the increased demand created by the war, the export quotas of the rubber-producing countries were raised, and Ceylon's exports increased to nearly 99,000 tons in 1940 and 107,500 in 1941. Japan's occupation of all the rubber-producing countries in Asia, save Ceylon (and India with 13,000 tons), resulted in further pressure upon the productive capacity of Ceylon. Exports in 1942 amounted to 123,000 tons, with the prospect for 1943 of 146,000, which would be more than double the pre-war output. While this increase in production is very creditable, the maximum production of rubber in Ceylon is understood not to have been attained. Once the difficulties that stand in the way of raising output still further are removed, a yearly output of 168,000 tons, or even more, is not excluded.

### Native Crops

#### Rice

From the native's point of view, neither tea nor rubber - nor for that matter his principal cash crop, coconuts - is the most important one. It is the rice crop on which the entire population, not European in origin, subsists. Yet it cannot be emphasized too strongly that less than one-third of requirements is produced domestically. The causes underlying this fact already have been suggested, but they may be summed up (12, p. 119) at this point in the following words:

Why a purely agricultural country like Ceylon finds it necessary to depend on Burma for two-thirds of its rice requirements is due to the magnitude of the plantation industries, particularly of tea and rubber, and to some extent of coco-nuts. Not only do the plantation industries make use of the land much of which could grow rice or other cereals, but they employ a large labour force whose staple diet is rice.

To this should be added the low yield per acre, which is characteristic of rice cultivation in Ceylon.

Rice is cultivated in Ceylon where rainfall distribution is satisfactory or irrigation facilities are available. The rice lands are mainly in the low country, but considerable areas are cultivated in the midcountry up to 2,500 feet above sea level. The total area under rice is officially estimated at 850,000 acres, but attention must be called to the fact that this figure is given in the Ceylon Blue Book with unfailing regularity year in and year out. Against this official figure, an estimate prepared by revenue officers (7, p. 4) placed the total rice area at 940,000 acres. Much of the land is divided into small holdings of 2 to 3 acres. The sole exception is the Eastern Province where holdings of 25 acres are common. The rice holdings in turn are divided into separate rice fields ranging from half an acre in the east and north to as little as 10 or 12 square feet in the midcountry.

There are two rice-growing seasons largely determined by the northeast and southwest monsoons. The seasons are known as *maha* and *yala*, meaning long and short seasons, respectively. In the former, varieties requiring 5 to 6.5 months for growth are planted, and in the latter those maturing in 4 to 5 months. There are also a number of varieties grown in 3 to 4 months. The marked variations in rainfall and irrigation conditions make these different varieties essential. The equipment used for the cultivation of rice is rather simple, consisting of a kind of large hoe, or a primitive plow drawn by cattle or buffaloes, and a sickle-shaped knife to harvest the crop. The application of fertilizer to rice fields is the exception rather than the rule, although green-manuring is fairly extensively practiced in the districts of Kandy and in the extreme north of Ceylon.



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Data on yields are even less reliable than those on acreage, and since 1925 yield figures have not been included in official statistics. The last available official estimate was 14 bushels per acre. This figure is considered too low (12, p. 119), but even when raised to 20 bushels, the annual output may be estimated at 17 million bushels, on the basis of the official estimate of 850,000 acres, and nearly 19 million bushels, on the basis of the semiofficial estimate of 940,000 acres. Taking the higher yield, it still compares unfavorably with Java's 32, Burma's 30, India's 26-27, and Japan's yield of more than 70 bushels per acre.

The causes underlying the low yield are manifold. Inefficient cultivation is one of them. Transplanting, which is widely practiced in rice-producing countries, is the exception in Ceylon. In addition, statements (12, p. 127) are made to the effect that "a proportionately greater area of short-aged rices is grown in Ceylon and, other things being equal, the longer the age the higher the yield," and "appreciable areas of land in Ceylon fail to mature a crop, or a normal crop, owing to failure of rains or shortage of irrigation water." Aside from these factors, there is the tenancy system with the yearly lease and a rental received by the landlord that amounts to 50 percent of the output. There is little or no incentive, therefore, for the tenant to cultivate and improve the land to the best of his ability.

The low yield per acre has not been compensated for by any expansion of acreage; hence the reliance upon imported rice. In each of the two 5-year periods 1926-30 and 1931-35 imports averaged 38 million bushels per year; in the years 1936-40 imports averaged 44 million bushels, against a domestic output of only 17 to 19 million bushels. Thus the output represents less than a third of the total yearly rice utilization of Ceylon. Approximately 70 percent of the imported rice was supplied by Burma and most of the remainder by British India and Thailand. With Burma and Thailand invaded by Japan, Ceylon's main source is British India, which at best has only a small exportable surplus.

This has necessitated the imposition of a strict rationing system for rice, preceded by a "grow more food" campaign, and the Government guarantees the purchase of rice at fixed prices. Funds have been appropriated for the conversion of government land to agricultural purposes at nominal rentals. Seeds for planting are provided, free of charge, and the Department of Agriculture itself is administering the cultivation of large tracts of land. The expenditure for the fiscal year (October 1, 1942-September 30, 1943) for food production is estimated at \$3,200,000. In addition, some wheat from Australia, and rice from India, despite the fact that it can ill afford to part with it, were shipped to Ceylon. All these measures have eased the situation, but the problem of sufficient rice supplies for Ceylon, produced in Ceylon, is one of the post-war problems confronting the country.

A number of other grain crops are grown in Ceylon in addition to rice. These are generally grown in so-called *Chenas*, areas of land covered with primary or secondary jungle, which are cleared and burned. This is a shifting system of cultivation, because a Chena is generally cultivated for two seasons only, and new land is taken up by clearing and burning the jungle during the dry season. Seeds are broadcast at the beginning of the rains in the loose topsoil and ashes. The principal grains grown in the *Chenas* are corn and a variety of millets; vegetables and sesame, from which sesame-seed oil is extracted, are also raised in small quantities. The total area under *Chenas* is estimated at 77,000 acres.

The Chena system of cultivating food crops is wasteful of timber and land. It is primitive, requires no equipment or cattle, and is usually practiced in the Tropics where the population is sparse and poor and jungle land is plentiful.

## Coconuts

The coconut industry of Ceylon is not so important on the whole as the tea industry, but in relation to native agriculture it is vastly more important. Thus (2, p. 7),

considered with reference to the place the Coconut Industry occupies in the village economy it should be given precedence over all other agricultural industries in the Island. In tea . . . the share of the villager is insignificant; in rubber, though larger, it is not very considerable; but in the case of coconut it is the village garden that predominates. In fact, in the districts where coconut flourishes, it is the principal money crop of the average villager.

Despite its significant role, it is not a profitable industry as far as the natives are concerned. A considerable number of the coconut plantations have been opened up with the aid of borrowed capital, and much of the European, and particularly Indian, money lenders' capital is interested in this industry by way of mortgages and loans. Estimates indicate that 60 percent of the Ceylonese-owned coconut land has been mortgaged for amounts higher than its present market value and at rates of interest varying from 8 to 30 percent per year.

Among the crops of Ceylon the coconut plays a vital role as both a food crop and an export product when converted into copra (the dried meat of the nut) and oil. The uses to which the byproducts of the coconut are being put are too numerous to mention. The area under coconuts, which is the largest acreage under any single crop in Ceylon, is variously estimated from 1,100,000 to over 1,200,000 acres, or roughly about a third of the total crop area of Ceylon. After the Philippines, the Netherland East Indies, and India, the island is the largest coconut-producing region of the world. Since it is a native industry, the acreage is widely distributed in small holdings. A census of production for 1924 to 1929 revealed that less than 163,000 acres were in plantations of over 30 acres, whereas 913,000 acres were in small village holdings (14, p. 76).

Coconut palms fringe almost the entire coast line, but they seem to flourish also in the interior up to an altitude of 1,500 feet. The bulk of the coconut acreage lies in the Northwestern, Western, and Southern Provinces. The total output of nuts in the years 1929-38 ranged between a maximum of 1,800,000,000 and a minimum of 1,500,000 nuts (3, p. 171). Of this volume, 40 percent was consumed domestically, and the remainder was exported, mainly in the form of coconut products (5, p. 333).

Among Ceylon's agricultural exports, coconut products are third in importance, being superseded by tea and rubber. Only in the years 1931-33, when rubber prices were at an all-time low, did the export value of coconut products exceed that of rubber. During the 5 years 1934-38 exports of coconut products averaged \$13,500,000, or 14 percent of all exports. In the typical pre-war year, 1938, Ceylon exported 16 million fresh coconuts and 300,000 tons of coconut products (see table 5).

TABLE 5.-Exports of coconut products from Ceylon, 1938

PRODUCT	VOLUME	PRODUCT	VOLUME
	<i>Short tons</i>		<i>Short tons</i>
Copra . . . . .	94,000	Cir fibre <sup>2</sup> . . . . .	46,000
Coconut oil . . . . .	94,000	Coir yarn . . . . .	5,600
Desiccated coconut . . . . .	37,000	Coconut shell charcoal . . .	13,440
Coconut poona <sup>1</sup> . . . . .	46,000	Fresh coconuts . . . . .	<sup>3</sup> 16,000

<sup>1</sup> A byproduct of coconut oil used as cattle feed or fertilizer.

<sup>2</sup> Made from fibers forming the husk of the coconut.

<sup>3</sup> Thousands of units.

Compiled from official sources.

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Exports are being maintained during the war, although the direction and the type of some of the products of the trade have changed. With the Japanese occupation of the Philippines, the United States became an important purchaser of Ceylonese coconut products. Formerly, the United States was a negligible factor in that trade, but during 1942 it accounted for 35 percent (by value) of all exports from Ceylon. Exports of coconut oil have declined since the war, due to the closing of normal outlets and also because of the complete loss of the market for *poonac*, a byproduct of crushing, formerly exported to Belgium. Exports of copra, on the other hand, have shown a marked rise. As in the past, nearby India is still one of the principal consumers of Ceylon's coconut products. In conclusion, one might note that the volume of exports of all coconut products from Ceylon is only a relatively small part of the total lost by the United Nations when Japan invaded such rich coconut-producing regions as the Netherland East Indies, the Philippines, and Malaya. In 1938 the Philippines alone exported 377,000 short tons of copra, 38,000 tons of desiccated coconuts, and 182,000 tons of coconut oil.

### Other Crops

#### Cocoa

Among the minor export products cocoa is the most important. Its cultivation is restricted to favorably situated valleys at elevations of between 500 and 2,000 feet, with a rainfall of 60 to 80 inches. The total acreage under cocoa in Ceylon is estimated at 35,000 acres, of which 32,000 acres lie in the Central Province, and the remaining 3,000 acres are in the Northwestern Province.

Less than a third of the total acreage consists of plantations of 10 acres and more. In addition to one large plantation of about 3,000 acres, there are 20 plantations ranging in size from 100 to 700 acres each and 35 plantations of from 10 to 100 acres each. In all, the plantations account for about 10,000 acres, leaving 25,000 acres made up of small holdings in the hands of the native cultivators (6, pp. 79-80).

The tree begins to bear fruit at the fifth year, two crops a year being gathered thereafter. The average yield is between 400 and 450 pounds per acre. Before the war approximately half the cocoa exports went to the Philippine Islands; the United Kingdom offered the next most important markets for this product. The total volume of cocoa exported from Ceylon in 1938 was 8,100,000 pounds.

#### Arecanuts

In addition to the large coconut acreage, Ceylon also has an estimated 69,000 acres under arecanuts. The arecanut is grown in most village gardens in the wetter districts of the island. It is consumed very widely in Ceylon proper either as fresh fruit or in dried form. British India is the main market for exports of arecanuts, which in 1938 amounted to 9,400,000 pounds.

#### Cinnamon

During the days when the Portuguese (sixteenth century) and, later on (seventeenth and eighteenth centuries), the Dutch held sway over Ceylon, the entire world supply of cinnamon originated on the island. This product was one of the most lucrative branches of the Dutch East India Company's trade. Even under the British in the 1820's and 1830's cinnamon was by far the most valuable of Ceylon's exports. At present it is one of the minor items of the country's export trade.



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The total area of cinnamon approximates 26,000 acres, of which 58 percent is in the Southern Province and the remainder in the Western Province. The industry is entirely in the hands of the Ceylonese. There are but few plantations of more than 100 acres and only on these is cinnamon systematically cultivated. The size of most cinnamon plantations ranges between 10 and 25 acres. An acre yields about 120 pounds of cinnamon quills and an unspecified volume of chips. In 1940 Ceylon exported 3,779,000 pounds of quills and 1,240,000 pounds of chips. Of these amounts, exports to the United States accounted for 23 and 25 percent, respectively.

#### *Citronella Oil*

Citronella oil is extracted from the leaves of a large coarse grass, growing 3 to 4 feet high. It flourishes up to an elevation of 2,000 feet, and its cultivation is confined entirely to the Southern Province. The total area under citronella oil, which is in the hands of the Ceylonese, is estimated at 33,000 acres. The grass may be cut twice a year, and it yields about 40 pounds of marketable oil per acre. Before the war Ceylon's citronella-oil exports amounted to about 1,500,000 pounds, approximately 50 percent of which was shipped to the United States.

#### *Cardamom*

Cardamom fruit has a commercial value because of the spice obtained from it. This spice is used not only in flavoring food but as a source of medicinal preparations. There are in Ceylon about 6,000 acres under cardamom plants; most of the acreage is in the hands of Europeans. They grow in clumps under the shade of forest trees at elevations between 2,800 and 4,000 feet, with a rainfall of 115 to 150 inches.

#### *Tobacco*

Tobacco growing in Ceylon is three centuries old but has made little progress. It is confined to the production of dark, coarse, and strong-flavored types, which are mainly used as chewing tobacco and for cheroots. These types find no demand in western countries and very little in eastern countries.

The area under tobacco is variously estimated at from 12,000 to 14,000 acres. The principal tobacco-growing district is in the Northern Province, in the vicinity of Jaffna. This section raises over one-half of Ceylon's tobacco. Other areas of importance are in the Northwestern and North Central Provinces. As in the case of a number of other crops in Ceylon, reliable data on yields are lacking; the average is roughly estimated at 1,600 pounds per acre. Such a yield would indicate an annual production of from 19 to 22 million pounds.

Most of the tobacco is consumed domestically. In recent years exports amounted to about 2,500,000 pounds of unmanufactured tobacco. All of this is shipped to South India for use as chewing tobacco. Imports of tobacco into Ceylon amount to 1,500,000 pounds, of which one-fifth is in the form of manufactured tobacco. Most of the unmanufactured tobacco imported into Ceylon comes from the United States; it is a Virginia type suitable for cigarette making.

### LIVESTOCK INDUSTRY

One of the weakest links in Ceylon's agriculture is the livestock situation. In round numbers, the livestock population is small: 1,127,000 cattle, 543,000 buffaloes, 233,000 goats, 63,000 sheep, 37,000 swine, and 1,300 horses. These 1938 figures differ little from those of two decades ago; nor is the existing state of the livestock



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industry any better now than in the years gone by. Then, as now, livestock as an important adjunct to farming was largely neglected.

Cattle are kept in Ceylon, as a general rule, for one of three purposes: Dairying, draft, and fertilizer. All these purposes are, however, defeated by the manner in which the cattle are fed and the widespread prevalence of diseases. There is little stall feeding, and good grazing facilities are limited. Since the livestock roam at large for feed, the animals supply not only little milk and meat, but also little fertilizer of any value. As one writer (16, pp. 193-194) put it, "Cattle have not got the faculty of creating anything out of nothing; all they can do is to transform the food they eat into manure." The feed being of poor quality, the manure they produce is even less valuable as a plant food.

On the whole, animal husbandry in Ceylon is in a very low state for two main reasons: (1) Lack of appreciation of livestock as a source of dairy and meat products, and (2) failure to realize the close interdependence between livestock and fertility of the soil. European planters have shown some initiative in improving the cattle industry in connection with improved methods of cultivation. But, by and large, the factors that make for sound animal husbandry have not yet taken root in Ceylon.

### CONCLUSION

Ceylon's agricultural economy is typical of a number of other colonial possessions; large-scale plantations owned and managed by Europeans, with crops raised for export, coexist with small-scale, backward, native farms, devoted primarily to the production of crops for domestic consumption. By virtue of large capital resources, thorough application of science, and the large part plantation crops play in the country's export trade, Ceylon's plantation agriculture, rather than native farming, dominates the island's economy.

This is a familiar colonial economic pattern, and a good case can be made for the beneficial effects of plantation economy, both regional and international in scope. Under certain conditions the indigenous inhabitants benefit from the type of agricultural economy introduced by Europeans. The benefit derived by the natives of Ceylon from exclusive concentration upon the plantation system, however, is subject to question. They have learned much from the plantations - this explains the participation of the Ceylonese farmers in raising commercial crops - but their share is not a large one. Moreover, they raise less than one-third of the food requirements of the island. This is an abnormal development for a purely agricultural country such as Ceylon and was caused in large part by the low state of native farming.

The Government of Ceylon has had much to do with the fostering of the plantation economy. It has succeeded well in its undertakings, but at the same time it has tended to overlook the interests of native farming. The validity of an economic policy that emphasizes the raising of export crops has indeed been questioned in recent years even in official circles. Thus the Government Report for 1938 (4, p. 1) states:

For Ceylon the question for solution is whether she should attempt to develop her foreign trade at the expense of her internal development, or whether she should be prepared to sacrifice or acquiesce in a diminution of her export trade and concentrate on the production of her own food, and as far as possible produce her own clothing.

The fact that the problem is being posed, and in such a manner, is a likely indication that the future course of Ceylon's economy will be subjected to closer scrutiny. One need not expect a decline of Ceylon's plantation agriculture, particu-

larly as it concerns tea, but the old notion that the larger the export trade in commercial crops the sounder the prosperity of Ceylon will probably find a less receptive audience. Perhaps the solution lies in the adoption of a middle course, one of the basic premises of which will be consideration of native farming, with a view toward improving the economic welfare of the native population.

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## THE RURAL COOPERATIVE IN BULGARIA . . . . .

By Irwin T. Sanders\*

*Because the cooperative movement has gained considerable headway in the Balkans since the last World War, it is a factor to be considered in any plans for agricultural reconstruction in that area. The Bulgarian cooperatives are historically related to a communal form of family life of a few generations ago and to many shared activities of today. Not only are they important agencies in the improvement of agricultural practices through the services they render, but they are also a bridge between the old folk society to which the peasant is accustomed and the commercialized, capitalistic way of life now confronting him.*

Cooperation as a way of life is rooted deeply in the traditions of the Bulgarian peasant. In the old joint family, or *zadruga*, whose influences are still felt today, everybody owned everything in common, submitting to the direction of some elderly male head (*domakin*) who held his place by mutual consent. Should he manage the affairs of the *zadruga* unwisely, then the members, who sometimes numbered as many as 100, could replace him with another more competent. Even though these large families broke up after Bulgaria's independence in 1878, the traditions surrounding this life in common still persist.

Traditionally, too, members of the village community have cooperated on many matters. The community owned pastures in which communal herdsmen took care of the swine and goats for the villagers, at the end of the day starting them toward the village where they rushed through the streets in a cloud of dust to turn, unguided, into the proper gates. In their work groups, where one neighbor would help another and be repaid in kind, the peasants put into practice the principle that "many hands make light work."

Thus the cooperative movement is a part of the peasant's social heritage, both in respect to the larger family group and the village community.<sup>1</sup> This movement, therefore, is no mere accident but has grown in spite of merchant opposition and inefficient local management.<sup>2</sup>

The strength of the cooperatives is shown by the membership, which had grown from less than 400,000 in 1920 to almost 850,000 by 1937. This means that more than half the families of the country are represented in a cooperative of some sort. The cooperatives total 3,179 in number, of which 825 are in towns and 2,354 in villages. The village credit associations number 1,961, or 83 percent of all village cooperatives.

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<sup>1</sup> Angel Djelepov gives some of the historical background in *SUSHTNOST, ZNACHENIE I RAZVOI NA BULGARSKATA KOOPERATSIYA* (CHARACTER, SIGNIFICANCE, AND DEVELOPMENT OF THE BULGARIAN COOPERATIVE), *Spisanie na Bulgarskoto ikonomicheskoto druzhestvo* (Mag. Bulgar. Econ. Assoc.), 3: 157-163. Sofia.

<sup>2</sup> One of the reasons for the high morbidity of Bulgarian cooperatives (44 percent inactive) is the frequent failure to select competent managers.



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The peasant thinks of his local cooperative first of all as a credit agency. It is a place where he can get loans to see him through recurring financial crises. Within recent years, however, the village cooperative has increasingly taken on other functions, such as insurance of property, crops, and livestock; production of some special commodity, such as cheese or wine; the hiring out of agricultural machinery; distribution of good seed; and the marketing of cereals, fruits, vegetables, or eggs. This marketing function has been especially emphasized since the Bulgarian Agricultural and Cooperative Bank designated the General Union of Agricultural Cooperatives as its chief purchasing agent for several monopoly commodities.

### THE BULGARIAN AGRICULTURAL AND COOPERATIVE BANK

This Bank had a humble beginning during Turkish rule in what is now Northern Bulgaria.<sup>3</sup> A socially minded Turkish official, Midhat Pasha, started grain banks to which the peasants contributed a tithe of their grain and from which they were able to obtain seed later on or borrow money from the funds secured when surplus grain was sold. After the Russo-Turkish War of 1878 these agricultural loan associations were legally amalgamated into the Bulgarian Agricultural Bank. In 1910 the Central Cooperative Bank, interested primarily in urban cooperatives, appeared on the scene and for a while was a formidable rival of the Agricultural Bank. Differences as to jurisdiction and policy were settled when both were combined in 1934 under the name of the Agricultural and Cooperative Bank of Bulgaria.

This Bank is used by the Government to accomplish aims that it considers desirable, among these being the furtherance of cooperatives in the villages. The Bank, however, is given the right to audit the books of all such societies, whether they are among the 10 percent that have not borrowed from the Bank or the 90 percent that have. Although the Bank officials do not apply their powers drastically, they can call general meetings of cooperatives and act to remove their officers.

The Agricultural and Cooperative Bank is also charged with the handling of a number of marketing monopolies, among them rye, wheat, maslin, hemp, attar of roses, silk, tobacco, cotton, and sunflower oil.

[This system] covers a good deal of indirect subsidy through fixed prices, in the case of grain, at the expense of the home consumer, in others, at the expense of the budget. On the whole, however, the monopoly method appears to be . . . used not merely to bolster up the agriculturist as he is, but to provide a direct economic inducement to the adoption of intensive methods and the more valuable industrial crops which it is believed to be the only basis for ultimate national stability and prosperity.<sup>4</sup>

The Bank's chief function, however, is to make agricultural loans, many of which are to cooperatives. It advances to the cooperatives not only permanent and working capital but also funds for reloan to members of the society. Individual peasants, not members of cooperatives, can also borrow money through the 90 district offices of the Bank.

<sup>3</sup> For an excellent account of the origin of this Bank, see MARKHAM, R. H. MEET BULGARIA. 391 pp., illus. Sofia. 1931.

<sup>4</sup> DIGBY, MARGARET. THE BALKANS AND THE SOVIET UNION: BULGARIA. Year Book Agr. Co-op. 1937: 107-135, illus. London. 1937. The best detailed discussion in English of the Bulgarian village cooperatives.

D. Dunev has prepared a 91-page booklet in Bulgarian on cooperation in Bulgaria (Kooperatsiyata v Bulgaria), published by the Association of Bulgarian Agronomes, Sofia, 1938.

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## THE GENERAL UNION OF BULGARIAN AGRICULTURAL COOPERATIVES

The general Union, called *Suyuz*, is the unifying agency of the whole rural cooperative movement. It is a federation of 1,239 agricultural cooperatives and 32 district or regional unions. The district syndicates link the local societies together and handle the wholesale trade. Of the locals, 1,201 are credit associations, with a variety of other economic activities; the other 28 are consumers' and producers' cooperatives.

Although the Union has an educational program, conducted chiefly through the medium of weekly and monthly papers, its main activities are economic. As has already been indicated, it has been directed to purchase large quantities of cereal foods for *Hraniznos*, the government agency in charge of the export of agricultural commodities, which works in conjunction with the Agricultural Cooperative Bank.

A further activity of the Union has been the collection, grading, and export of eggs. In 1935, for example, its egg exports represented about 12 percent of the total for the country. The same year it exported 894 carloads of grapes and fruit, or 10 percent of the total fruit exported during that year. The Union, through its affiliated district syndicates, takes an active part in the wholesale trade of commodities to local cooperatives, although the central office does not directly handle the transactions involved.

## THE LOCAL ASSOCIATION

The village cooperative, as may be inferred from the preceding statements, is more than just a group of peasants banded together in a mutual-aid association. It is intimately connected with the financial structure of the country through its dependence upon the Agricultural and Cooperative Bank, both as to credit and to control. It is connected with the whole cooperative movement, giving support to and receiving help from the General Union, which protects the local's interests and in a general way directs the cooperative activity on a national scale. The village cooperative, especially if it is of the general-purpose type, keeps in touch with a district cooperative union, from which it buys many commodities and to which it sells products collected from the peasants.

The marketing activities of a local association vary with the agricultural specialization of that locality. In the sheep-raising areas cooperatives have entered the field of cheese production. Digby describes this as follows:

... marketing of sheep's milk ... is subject to State regulation. In all large producing areas, only one selling agency is permitted. The agency is put up to auction annually, in the presence of the State officials and the representatives of the peasants. Private traders are rarely willing to put up much plant under these conditions, and a steady propaganda in favour of co-operative dairies is being carried on. If a co-operative society for milk sales is formed and supported by a bare majority of the producers, the minority is compelled to come in, and with the approval of the State, the society receives the agency for a period of years, generally ten. Licensed dairies of this type are increasing, and most of them are attached to general purpose co-operative societies. A certain number of private dairies, perhaps owned by farmers, and certainly financed by co-operative banks, are also in process of conversion into co-operative societies.<sup>5</sup>

In addition to these, a number of marketing cooperatives specialize in particular commodities. There is a cooperative tobacco union that consists of 22 large societies, each serving a district. Before the war two silk-producing cooperatives bulked, dried, graded, and sold cocoons to Italy. Wine societies are widely distributed.

<sup>5</sup> See p. 117 of reference cited in footnote 4.

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Cooperatives are also entering the wool trade.<sup>6</sup> In the Rose Valley a few cooperative distilleries compete with private distillers in purchasing the rose petals for distillation into the attar of roses. These cooperatives in Bulgaria differ in their membership requirements, in their ways of distributing earnings, and in the services performed. Certain governmental regulations must, however, be met. Credit cooperatives, for instance, with deposits in excess of their local loans are obliged to invest the surplus in the Agricultural and Cooperative Bank.

A prominent Bulgarian agricultural economist points out that a country made up of small holdings can through cooperatives keep all the advantages of these small farms and at the same time have the advantages of large estates. The small farms, for example, can use cooperatively all the means of production (such as heavy equipment), which, due to their high cost and working capacity, can normally be owned and utilized by only the big farm units. Similarly, wine cellars and milk plants can make it possible for the small farmer to market standardized products that find a much quicker sale than would the products from many different households.<sup>7</sup>

Because of their increased activity in the export field, the Bulgarian cooperatives have grown strong financially. But new problems have arisen. One of the government measures which aroused the fears of the cooperatives was the organization of the Union of Farmers' Vocational Associations in February 1937. Under this, farmers of every village are required to form a "vocational association" to which all farmers must pay the annual dues but in which membership is optional. The purpose of this organization was stated to be the furtherance of the interests of the farmers economically, culturally, and socially. Representatives of these organizations serve on the village councils and attend the meetings of the chambers of agriculture. This is an adaptation of the Italian system of corporations to the Bulgarian scene. It means that a man's voice in government is expressed through occupational status rather than through geographical location or affiliation with any political party.

#### THE COOPERATIVE A BRIDGE BETWEEN THE OLD AND THE NEW

The Bulgarian villager has three widely differing ways of marketing his produce. The first, the weekly market, symbolizes the old barter system, which has come down from the Middle Ages, and which is characteristic of the peasant society. It has its social and recreational features as well as its economic functions. At the other extreme is the commercialism of the western countries, which is illustrated by the buyers with their emphasis upon driving a shrewd bargain so that they may have more to spend in the cash economy of the city. In between these two types is the cooperative which, without replacing either the traditional "communalism" of the peasant or the capitalistic nature of world-wide trade, offers a compromise between the two. The peasant can exchange his goods for other goods at the local cooperative store; if he needs money for taxes, he can borrow and repay when the harvest is completed. He handles very little money because he does not value it for its own sake.

Thus it may be seen that the general-purpose cooperative, when efficiently managed, is well able to represent the Bulgarian peasant in the world of business competition. It offers a middle ground between the peasant economy or folk society and the modern capitalistic way of doing things.

<sup>6</sup> GUNCHEV, Z. S. KOOPERATIVNO SUBIRANE I OBSHTA PRODAZHBA NA VULNA (COOPERATIVE COLLECTION AND TOTAL SALE OF WOOL), *Zemedelsko-Stopanski Vuprosi* (Agr. Econ. questions), 5: 138-155, 111us.

<sup>7</sup> MOLLOFF, JAN [IAN] S. PRESENT STATUS OF THE RELATIONSHIP BETWEEN SIZE OF FARMS AND COOPERATIVES. *Univ. of Sofia Yearbook. Faculty Agr. and Forestry*, 1939-40. 18: 149-179 [In Bulgarian; English summary pp. 177-179.]